CLAIMS

What is claimed is:

1. A method of forming an airbag assembly and trim component for a vehicle comprising:

a. providing a substrate;

b. providing a first mold structure having a first surface formed therein;

c. positioning the first mold structure relative to the substrate such that the first surface and the substrate are in a spaced relationship with one another to define a first cavity;

d. introducing a first material into the first cavity to form a first portion of an airbag assembly overmolded to the substrate to produce the airbag assembly and trim component.

2. The method of Claim 1, further including molding an outer layer, such that the outer layer is overmolded to a portion of the substrate.

3. The method of Claim 2, wherein the outer layer and the first portion of the airbag assembly are formed of the same material.

4. The method of Claim 3, wherein step (c) further includes replacing the second mold structure with a third mold structure having a second surface, such that the second surface of the third mold structure and the substrate are in a spaced relationship with one another to define a second cavity, and the first surface of the first mold structure and the substrate are in a spaced relationship with one another to define the first cavity, and wherein step (d) further includes introducing the first material into the second cavity to form the outer layer overmolded to the substrate, such that the outer layer and the portion of the airbag assembly are formed substantially simultaneously.

5. The method of Claim 4, wherein the first cavity and the second cavity are communicably connected, such that material introduced into one of the first cavity and the second cavity flows into the other of the first cavity and the second cavity.

6. The method of Claim 5, wherein step (d) further includes forming at least one aperture through the substrate, such that the at least one aperture provides the communicable connection between the first cavity and the second cavity.

7. The method of Claim 1, wherein the method further includes the following steps subsequent to step (d): providing a third mold structure having a second surface formed therein; positioning the third mold structure relative to the substrate such that the third surface and the substrate are in a spaced relationship with one another to define a second cavity; and introducing a second material into the second cavity to form an outer layer overmolded to the substrate.

8. The method of Claim 1, wherein providing the substrate includes providing a first substrate mold structure having a first substrate mold surface formed therein, providing a second substrate mold structure having a second substrate mold surface formed therein, positioning the first mold structure relative to the second mold structure, such that the first substrate mold surface and the second substrate mold surface are in a spaced relationship with one another to define a substrate cavity, and introducing a substrate material into the substrate cavity to form the substrate.

9. The method of Claim 8, wherein the substrate material is different from the first material, and wherein the first material and substrate material are compatible, such that the first material and second material may be overmolded to one another.

10. The method of Claim 1, wherein step (c) further includes positioning a sheet of scrim material within a portion of the second cavity, such that the scrim material will be embedded within at least a portion of the first portion of the air assembly in step (d).

11. The method of Claim 1, wherein the first material is made of a material selected from the group consisting of thermoplastic elastomer, thermoplastic elastomer olefin, thermoplastic elastomer polyolefin, Santoprene®, styrene maleic anhydride, Dylark®, polycarbonate, polypropylene, acrylonitrile butadiene styrene, polycarbonate acrylonitrile butadiene styrene, styrene maleic anhydride, polyphenylene oxide, nylon, polyester, acrylic, polysulfone, thermoplastic polyether, thermoplastic urethane, polypropylene, polyurethane, copolyester, thermoplastic styrenic elastomer, and nylon.

12. The method of Claim 1, wherein the substrate is made of a material selected from the group consisting of thermoplastic elastomer, thermoplastic elastomer olefin, thermoplastic elastomer polyolefin, Santoprene®, styrene maleic anhydride, Dylark®, polycarbonate, polypropylene, acrylonitrile butadiene styrene, polycarbonate acrylonitrile butadiene styrene, styrene maleic anhydride, polyphenylene oxide, nylon, polyester, acrylic, polysulfone, thermoplastic polyether, thermoplastic urethane, polypropylene, polyurethane, copolyester, thermoplastic styrenic elastomer, and nylon.

13. The method of Claim 1, further including the steps:

e. positioning the second mold structure away from the substrate;

f. providing a third mold structure having a second surface formed therein;

g. positioning the third mold structure relative to the second mold structure such that the second surface, the substrate, and at least a portion of the first portion of the airbag assembly are in a spaced relationship with one another to define a second cavity; and

h. introducing a second material into the second cavity to form a portion of a second portion of the airbag assembly molded to the substrate, wherein the second material is different from the first material, to produce the trim component and airbag assembly.

14. The method of Claim 13, wherein step (g) further includes positioning a sheet of scrim material within the second cavity such that the scrim material will be embedded within the second portion of the airbag assembly in step (h), wherein the first portion of the airbag assembly defines a chute and the second portion of the airbag assembly defines a hinge.

15. The method of Claim 13, wherein each of the first portion of the airbag assembly and the second portion of the airbag assembly defines one of a hinge and a chute.

16. The method of Claim 15, further including attaching a portion of hinge to a portion of the chute.

17. The method of Claim 15, wherein step (h) further includes forming an aperture in the hinge, further wherein a portion of the chute is disposed within the aperture to secure a portion of the hinge to the chute.

18. The method of Claim 17, wherein the aperture is elongated, such that the hinge is movable between a retracted position and an extended position relative to the chute, such that the hinge may be movable to the extended position when the airbag is deployed and the airbag door is removed from the trim component to allow the airbag door to swing further outward from the chute.

19. The method of Claim 1, further including the step:

scoring a portion of the exposed portion of the substrate to form an airbag door.

20. A method of forming a component for a vehicle comprising:

a. providing a first mold structure having a first surface formed therein, a second mold structure having a second surface formed therein, a third mold structure having a third surface formed therein and a fourth mold structure having a fourth mold surface formed therein;

b. positioning the first mold structure relative to the second mold structure such that the first and second surfaces are in a spaced relationship with one another to define a first cavity;

c. introducing a first material into the first cavity to form a substrate for an trim component;

d. positioning the second mold structure away from the substrate;

e. positioning a third mold structure relative to the first mold structure such that the third surface and the substrate are in a spaced relationship with one another to define a second cavity;

f. introducing a second material into the second cavity to form an outer layer overmolded onto the substrate, wherein the first material is different from the second material, and wherein the second material has a different tactile characteristic than the first material, and the first material has a generally rigid characteristic for structurally supporting the second material;

g. positioning the first mold structure away from the substrate;

h. positioning a fourth mold structure relative to the second mold structure such that the fourth surface and the substrate are in a spaced relationship with one another to define a third cavity; and

i. introducing a third material into the third cavity to form a portion of an airbag assembly overmolded onto the substrate, wherein the third material is different from the second material, and wherein the fourth mold structure includes a portion which covers an exposed portion of the substrate to prevent the third

material from overmolding onto the substrate when the third material is introduced into the third cavity.